An elaborate chemical analysis of Tobacco, has been published by M. Vauquelin in the *Annales de Chimie*. His results are, that the broad leaved Tobacco furnishes from its juices the following constituents. 1. A large quantity of animal matter of an albuminous nature. 2. Malate of lime with an excess of acid. 3. Acetic acid. 4. Nitrate and muriate of potash in observable quantities. 5. A red matter soluble in alcohol and water, which swells and boils in the fire, its nature undetermined. 6. Muriate of ammonia. 7. A peculiar acrid, volatile, colourless substance, soluble in water and alcohol, and which appears different from any thing known in the vegetable kingdom. It is this principle which gives to prepared Tobacco its peculiar character, and it is perhaps not to be found in any other species of plant. The medicinal activity of Tobacco evidently resides in this volatile portion, for both the extract and decoction of the plant by long boiling become nearly inert, while the essential or the empyreumatic oil is one of the most deadly poisons known.

Among the substances used by Mr. Brodie in his experiments or vegetable poisons, was the empyreumatic oil of Tobacco prepared by Mr. Brande by distilling the leaves of Tobacco in a

heat above that of boiling water. A quantity of watery fluid came over, on the surface of which was a film of unctuous substance, which he calls the empyreumatic oil. Mr. Brodie found that two drops of this oil applied to the tongue of a young cat with an interval of fifteen minutes occasioned death. A single drop suspended in an ounce of water and injected into the rectum of a cat, produced death in about five minutes. One drop suspended in an ounce and a half of mucilage and thrown into the rectum of a dog, produced violent symptoms, and a repetition of the experiment killed him.

Tobacco has been used both as a luxury and prophylactic, and as a medicine. In the former cases it has not been taken internally, but only kept in contact with absorbing surfaces. It is well known, that to the mouth it is applied in substance and in smoke; and to the nose in the form of powder. The opinion which at one time prevailed of its power to prolong life and to secure immunity from diseases is now pretty fully abandoned. It has no prophylactic reputation except as a preservation for the teeth, and in some degree as a protection against the contagion of epidemics. In both these cases it is entitled to a certain degree of confidence, though